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IT Politics in the Domain of Knowledge Workers: A Chronological Analysis of Learning Management Systems

Wenshin Chen

Abu Dhabi University, Abu Dhabi, UAE

Abstract

Markus's study of IT politics has been influential for the IT implementation literature since the 1980s. However, mistakes of the top-down implementation approach could still be easily found in many organizations. Derived from Markus's notion of interaction theory and Drucker's work on knowledge workers, this paper illustrates a LMS (learning management systems) implementation case that evolves from such traditional top-down approach. Based on a chronological analysis, the case study narrates how IT politics was shaped in a context where most stakeholders were highly skillful knowledge workers whose academic autonomy was largely overlooked. Reflective discussion suggests how the implementation process might have been better managed. Evidently, even decades after Markus's and Drucker's influential work, history still repeated itself and IT politics continued to provide lessons for contemporary IT managers and researchers. Future strategy and implementation approach for campus IT projects and LMS implementation in particular are recommended.

Keywords: IT politics, learning management system, knowledge worker, chronological analysis

Introduction

The purpose of this study is to understand how IT politics shape the implementation of learning management systems (LMS) and how organizations could make better strategic management of these emerging educational tools. This investigation is particularly interested in LMS because these tools have gained increasing attention in the industry and in the research community. Evidently, many higher education institutions have adopted or considered adopting certain learning management systems and this new development of learning management systems has become a worldwide phenomenon (Babo and Azevedo, 2009). In addition, according to Babo and Azevedo, an emerging trend where higher education institutions have been shifting from propriety software such as Blackboard and

WebCT to open source tools such as Moodle is increasingly changing how vendors and higher education institutions compete in the academic context.

While the work of Babo and Azevedo is insightful, our research community lacks an adequate understanding of how higher education institutions make strategic planning of LMS or whether they have indeed any strategic planning for these emerging tools that might change how the teaching and learning process be involved in the higher education environment. Moreover, even if the movement from proprietary software to open source systems is widely confirmed, there is a need to call for a clear understanding of decision making factors that lead to such a movement in the higher education context. While the literature of IT politics has evolved over decades (Chen and Bennett,

2010), most IT projects apparently continued to be entangled with those issues that eventually led to implementation failures (Chen and Bennett, 2009). In the domain of knowledge worker and knowledge economy, strategic management of information systems would particularly need to take on a different approach that requires deeper understanding of participants than what the traditional top-down implementation model is concerned about (Brown, 1995). Drawing from the literature of IT politics (Markus, 1981, 1983) and knowledge worker (Drucker, 1985, 1988, 1999), this study thus inquires "how does LMS decision making evolve" and "how can an organization better implement LMS."

Drucker's notion of knowledge workers well reflects the research context where most system users (namely, faculty members) in the higher education institutions possess high knowledge domains while Markus's work on IT politics provides an insightful perspective where multifaceted issues are intertwined in the implementation process. Therefore, the integration of Markus's study of IT politics and Drucker's notion of knowledge workers provides an interesting theoretical foundation for this investigation. The contribution that this study makes is to reflect on historical perspectives that Markus and Drucker have advocated over the years and at the same time to place those perspectives into managing emerging information systems. In so doing, IT managers and researchers could derive lessons from the case story this research will soon narrate and develop a better strategic planning for their current and future IT management and LMS in particular.

Theoretical Foundation

The significance of politics in influencing information technology (IT) or information systems (IS) implementation has been arguably instilled in many researchers' and practitioners' minds since Markus's classic study (1983). While IT users might resist emerging systems for their self-interests and/or for inadequate technical design, the

interaction between systems users and the context in which the systems put into practice might be more influential than other factors involved (Markus, 1983). More specifically, Markus provided a three-dimension framework drawing from people-determined, system-determined and interaction theory that helped explain user resistance and IT politics. People-determined theory focuses on personal dimension and assumes that information systems, no matter what and how technical design and features are provided, are often resisted by certain people who differ from non-resistors. It predicts that user resistance will disappear as soon as people involved in the project are removed. System-determined theory focuses on technical dimension and assumes that information systems are resisted because they contain certain technical problems. It predicts that resistance will automatically fade away if technical problems are fixed.

Finally, interaction theory focuses on the social and political context in which information systems are situated. It assumes that information systems are resisted because there is a complex interacting process between people who are involved in the system project, the information systems implemented, and the organizational environment involved. This complex interacting process forms the social and political struggle among all stakeholders and the systems involved. It then predicts that resistance has little relation to personal dimension or technical dimension. Even if people involved in the project are removed or technical problems are fixed, user resistance will continue to occur because neither personal dimension nor technical dimension alone could explain the resistance taken place. In the end, Markus (1983) concludes, "the best prescriptions for an implementation strategy and for the specific design content of a system will follow from a thorough diagnosis of the organizational setting in which the system will be used" (p. 441).

In the context of LMS, it is even more imperative to understand the organizational setting in which these systems are deployed because the social

and political context that they are situated inherently involves knowledge workers with high academic skills. By definition, these knowledge workers will create an even more complex interacting context in which LMS, all stakeholders, and higher education institution are involved. Since coined by Peter Drucker in 1959 (Davenport, Thomas and Cantrell, 2002), knowledge workers have been widely documented as individuals who possess specific skill sets in certain domains and often use those skills to identify and resolve problems, prioritize and reshape organizational decision making, and influence and/or ultimately drive organizational strategies.

In fact, knowledge workers' productivity has become a frontier subject of strategic management (Drucker, 1999). Some of important concepts to improve knowledge workers' productivity include (Drucker, 1999, p. 84):

- ✎ Knowledge workers have to manage themselves.
- ✎ Continuing innovation has to be part of the work, the task and the responsibility of knowledge workers.
- ✎ Productivity of the knowledge worker is not—at least not primarily—a matter of the quantity of output. Quality is at least as important.
- ✎ Knowledge worker productivity requires that knowledge worker is both seen and treated as an “asset” rather than a “cost.” It requires that knowledge workers want to work for the organization in preference to all other opportunities.

Therefore, in predicting user resistance and IT implementation, the notion of knowledge workers would then suggest that knowledge workers be treated with respect and autonomy; if the implementation process failed to do so, knowledge workers would not ‘want’ to work for the system project or the organization and in turn they could create

a more complex interacting context that leads to a difficult, if not failed, system project implementation. In the domain of learning management systems, the notion of knowledge workers, integrated with Markus's classic work on IT politics, most notably interaction theory, will help better provide an integrative understanding of how LMS implementation evolves in higher education institutions as this study seeks to examine.

Research Context

The organization, tentatively named Lambda University (LU), upon which this research is embarked, is a private higher education institution established in the early 21st century. Among all of its unique characteristics, its for-profit business model distinguishes Lambda University from most, if not all, higher education institutions. Perhaps due to its unique context and new establishment, Lambda University experienced high instability over the years. In spring 2009, many staff including top administrators such as vice chancellor, provost, dean of business school resigned. A new provost was subsequently recruited and assumed the position in the fall of 2009. Upon his arrival, the provost immediately implemented many policies and information systems. Wireless networks and learning management systems were two of the major projects. Previously, these IT projects have been discussed and initiated but never indeed carried out, particularly LMS, that for some reason required more complex decision making.

Prior to the LMS project reported in this study, some of my colleagues have served on a task force committee led by an administrative office and examined various issues involved in LMS implementation for Lambda University. However, none of other faculty members than those who were initially involved was aware of any LMS development on campus. The case story in the section that follows narrates how the implementation process of LMS took place at DU from 2009 to 2010, mostly on a chronological basis.

Chronological Analysis

Chronological analysis is chosen as the research method because it can narrate the timeline of the implementation process in an authentic, detailed fashion. The timeline that is shown by chronological analysis highlights important events that shape the decision making of LMS at Lambda University. These events highlighted allow readers to interpret the case story over time and gain a clear understanding of how theoretical foundation, mainly Markus's study of IT politics and Drucker's notion of knowledge workers, manifests itself in this research context.

October 25, 2009—A New LMS Task Force was Formed

The provost, tentatively named Dr. McDonald, emailed a group of college deans and faculty members, setting up the first meeting of learning management system task force in two days and informing them the purpose of the task force and potential agenda of the first meeting.

October 27, 2009—The First Meeting

The first meeting was held in the provost's office. The task force consisted of three college deans, two representatives from each of three colleges, and one from the IT department. Interestingly, two college deans arrived at the meeting late but soon dominated conversation during the meeting while our acting dean at that time did not attend. Nonetheless, the provost made clear his intention about the task force and what objectives and tasks were planned already prior to the meeting. In the end, the outcome of the first meeting was to survey faculty members about their prior experience of learning management systems before the next meeting, which was in line with the provost's agenda prior to the meeting.

November 9, 2009—LMS Survey

An email message was sent from the assistant of the provost to the entire faculty members requesting them to fill out an

online survey regarding learning management system. The survey was closed in less than two weeks on November 22.

November 11, 2009—Introducing New IT Director

The provost sent a message regarding LMS updates. Besides reinforcing the progress of LMS survey, he for the first time introduced the new IT director who was also now included in the email list of LMS task force.

November 19, 2009—Conference Response to LMS Updates

On November 9th and 10th, I attended a conference in Marrakech, Morocco during which a special track of LMS was presented. As such, I responded to the provost's LMS updates with the following message:

"Dear Dr McDonald,

In a conference that I recently attended, there was a special track about learning management systems. One of those papers presented suggested that there is a growing trend in higher education institution to move from WebCT, Blackboard to Moodle... Attached is a copy of their paper for your reference."

November 20, 2009—Provost's Response

The provost responded immediately the next day with the following message.

"Thank you for the information. This is quite helpful. I anticipate that we will meet again after the survey results have been compiled – probably after the break. Thanks."

November 22, 2009—Another Task Force Member's Response

One of the task force members from computer science responded with the following message:

"Hello all

I also believe that Moodle is the right way to go for many reason(s):

- a) more universities and colleges are using it
- b) it is SCORM compliant which permits inter-operability among contents, c) it is an open source, etc."

November 27, 2009—The Second Meeting Scheduled

The provost soon called for the second meeting with the following message:

"I have attached summaries of the survey results. We will discuss these results and our next steps at the meeting."

However, survey results have never been attached. Interestingly, none of task force members further inquired about it.

December 8, 2009—Called for Blackboard Demo

Immediately after the second meeting, the provost contacted a Blackboard representative and requested for a demonstration. In a long message that mostly served marketing purpose, the Blackboard representative compared itself to Moodle and attached a file with case studies showing the superiority of Blackboard over Moodle. Although previous discussion of task force meetings suggested that we requested for demonstration from each service provider, none of other service providers than Blackboard was involved in the remaining decision making and implementation process.

December 20, 2009—Blackboard Demo Scheduled

Approximately two weeks later, the provost emailed the entire faculty with the following message to inform the Blackboard demonstration:

"As you may know, we have had a task force looking into various options for a learning management system for this

university. As a part of that process, we have invited representatives from BlackBoard to present a demonstration of their product on the campus. The demonstration will take place in the 1st floor videoconference room on Thursday, December 24 at 5:00 p.m."

Although the message implied that the decision was largely made by the task force, those who served on the task force knew it was not the case. The provost had leaned toward the Blackboard from the outset because it was the product that he once used in his previous school back in the U.S.

December 24, 2009—Blackboard Demo

A day before the demo, the provost sent out a reminder to encourage participation. Although the demo was scheduled in the second last week of semester (and on Christmas Eve), many faculty members participated in the meeting for high anticipation of 'ground breaking' technology at the university. However, the demonstration was mostly about marketing campaign introducing the company and its services in the region. Actual 'demonstration' about product and features was brief and unclear. While many faculty members asked detailed questions of their specific interests, I, as a task force representative seeking competitive information for decision making (assuming the decision was not yet made), requested that they show "what Blackboard can do for our university that other products such as Moodle cannot."

The representative responded that there was much information about company comparison on the web and suggested that I found information on my own.

December 31, 2009—Third Meeting (Blackboard Demo Follow-Up)

A call for the third meeting as the Blackboard demonstration follow-up was soon made by the provost.

The meeting was scheduled at the very last day of classes in the semester (and on New Year's Eve). When I walked into the

provost's conference room, only the provost and an unknown gentleman were present. It was then for the first time that the new IT director, the unknown gentleman in the room, was introduced. The soft spoken IT director made it clear that although the open source product of Moodle was free, its maintenance and service was not and that the IT department at the university clearly lacked of maintenance capability and would certainly disfavor and avoid Moodle. While his statement was not consistent with the technological or social trend in the field, it was completely in line with the provost's preference from the outset.

One suggestion this short meeting made was to request for a trail of Blackboard during the winter break that soon followed or in the beginning of spring semester. The first group of trail participants would be task force members since they were mostly more IT capable from their respective colleges. Little did we know that not just this conclusion was not followed but also it would be the last meeting of the task force, which was soon dissolved without any notice.

January 13, 2010—Called for Blackboard Trial

The day after final exam period concluded, the provost announced that an arrangement was made to try a three-month pilot product of Blackboard.

February 10, 2010—Called for Blackboard Training Participants

In the first week of spring semester, the provost emailed all college deans to solicit training participants from respective colleges for Blackboard pilot trial. I immediately volunteered to participate in training sessions. The executive assistant replied to my message as follows:

"Dear Dr. Wenshin,
Noted and thanks. We'll let you know the schedule later on."

February 11, 2010—Training Participants were Selected Exclusively

Surprisingly, the provost who was also our acting dean at that time emailed the business faculty and selected his own training participants: one, the acting chair of finance department, and the other, the former acting dean. In March, we 'heard' the training session started. One colleague from computer science made the following comments after attending a training session with the learning specialist from the provost's office:

"It was completely wasting time. We, trainees, know more about Blackboard than she does..."

However, in early April, an inside source from the provost's office revealed that a contract with Blackboard has been signed and that the decision was made "because the provost wants it." Since then, how the implementation process evolved has become virtually unknown to faculty members. In an interview that I conducted with the computer science colleague who attended initial training session, he called this implementation process a 'completely top approach' because decision making and implementation process has only involved top management groups.

September 2010—Recent Development

By September 2010, a new office called faculty development center was founded on campus and a new director resumed his position during summer break. The learning specialist who used to be under the provost's direct supervision was relocated to faculty development center and under the new director's supervision. When the learning specialist called for voluntary trainees in the beginning of fall 2010, only few faculty members attended the training session. I received the information to attend the training session and acquired a user ID and password to use Blackboard via personal contact with the learning specialist instead of the University

formal communication. Many faculty members were not aware of the training session and thus were left out in the fall semester of 2010. Their requests to use Blackboard for the fall semester were formally rejected because it was perceived that faculty members who failed to attend the last training session could not have adequate skills to use Blackboard for the immediate semester. Naturally, complaints among faculty members about this situation surfaced. In addition, it should be noted that the reason that many faculty members sought to use Blackboard was mostly because the university lacked other learning systems for faculty members to better manage their courses rather than because they particularly accept or embrace the product.

Currently, it has been approximately one year since the first LMS initiative meeting took place. The university's plan to formally implement Blackboard is spring 2011, which would mark nearly 16 months after the initiative was first undertaken. In other words, the project has been delayed for months. In addition, my personal use of Blackboard allowed me to closely examine the tool and compare it to previous product that I used. My experience led me to conclude that the current version of Blackboard implemented at Lambda University was not as user friendly as expected. The tool provided more features but many of them did not necessarily enhance course management. Instead, it only required more time to arrange course materials. Moreover, the learning specialist added herself as an instructor to every section shown in Blackboard because she wanted to see "how every faculty member was doing." Although she emailed all faculty members who were currently allowed to use Blackboard and promised that she would not change course content, this has caused some faculty members' complaints about course privacy and integrity.

Reflective Discussion

Based on chronological events narrated above, further predictions could be made as to how the implementation process

evolves (research question 1) and how to better manage it (research question 2). Markus's notion of IT politics, particularly interaction theory, would suggest that this implementation case clearly fell into the context where politics and user resistance would be shaped and encouraged. From the outset, the decision making was centered around the top administrator, the provost—Dr McDonald. The establishment of the LMS task force, among many other committees on campus at the same time, was largely to confirm and reinforce Dr McDonald's notion and preference. Each meeting of the LMS task force was brief and short as if the purpose was only to allow the provost's office to document a record about the meetings. No particular indication about natural resistance from certain people (as people-determined theory suggested) or technical problems about the LMS chosen (as system-determined theory concluded) manifested itself. The potential issues would lie underneath the political context in which decision making and implementation process centered on the traditional top-down approach that has been commonly criticized by contemporary systems development approaches.

From Drucker's notion of knowledge workers, it could also be suggested that the implementation of LMS at Lambda University would not improve the productivity of knowledge workers, i.e. faculty members, because these highly skillful academics were not respected or valued in the implementation process even when they served on the committee through which the decision making and suggestions were expected to be made. As of September 2010, the LMS project at Lambda University has been delayed. The quality of the product chosen (i.e. Blackboard) was not as user friendly as expected, not to mention its higher cost compared to other choices such as Moodle. In other words, based on triangle dimensions that measure the success of project management, the LMS project at Lambda University has somewhat failed on all dimensions (i.e. time, quality, and budget/cost). Moreover, as Drucker suggested, to improve knowledge workers'

productivity the organization needs to shape their motivation so that they would first 'want to work for the organization.' In the Lambda University case, knowledge workers were not treated as 'assets' as suggested by Drucker. Instead, perhaps due to its for-profit business model, the university has overloaded its faculty members with excessive teaching and administrative responsibilities. The administrators, if they intend to retain and motivate its faculty members and in turn improve their productivity, would need to reconsider their management strategy in general and the IT implementation approach (the LMS in this case) in particular.

Concluding Remarks

The study is inevitably limited by its research context and method chosen. It could only be claimed that the investigation is merely to provide insights rather than generalizable outcome to the business and research communities. The research method of chronological analysis chosen is also simply illustrating the authentic, detailed interactions among stakeholders involved in the project. It certainly lacks explanatory power that statistical analysis provides. Nonetheless, the case story narrated demonstrates subtle issues that would not be disclosed otherwise and connects those issues to theoretical foundation, i.e. Markus's IT politics and Drucker's knowledge workers, that could help us better understand how systems development and implementation evolves in a historical perspective.

More specifically, even decades after Markus's and Drucker's influential notions, history seems to repeat itself as the case of the top-down systems implementation approach at Lambda University reveals. It might imply that the complicated nature of social, political, and cultural context in which human interaction takes place will only continue to shape and reshape how systems implementation evolves. Given a different occasion (either time or location), managerial flaw could still be easily found in systems implementation process. Likely, this phenomenon will provide more

emerging contexts in which future researchers and practitioners could continue to learn and improve upon their managerial approach that better suits contemporary IT environment and different organizations' unique contexts. Future research opportunities are thus highly anticipated.

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